

1. A method of detecting a ligand in a liquid sample, the method comprising the steps of:

A. transporting along a flow path in a test cell a solution, including a liquid sample suspected to contain a ligand and a conjugate, into contact with a test site visible through a window in a wall of said test cell,

said test site having immobilized thereon a first protein having a binding site specific to a first epitope on the ligand,

said conjugate comprising colored particles coupled to a second protein selected from the group consisting of proteins having a binding site specific to a second epitope on the ligand and proteins which bind with said first protein in competition with the ligand, and

B. continuing transport of said solution to progressively produce at said test site a complex comprising said ligand for a time sufficient to visually determine through said window whether a color is developed at said test site.

2. The method of claim 1 wherein said test cell comprises a filtration means for filtering said liquid sample, said method comprising the additional step of transporting the sample through said filtration means before said sample contacts said test site.

3. The method of claim 1 wherein the cross-sectional area of said flow path is restricted about said test site whereby ligand is localized at said test site during flow of solution thereby.
4. The method of claim 1 comprising the additional steps of transporting said solution into contact with a control site visible through a window in a wall of said test cell and comparing the color of said test site and control site.
5. The method of claim 4 wherein said control site comprises a negative control site free of said first protein.
6. The method of claim 4 wherein said control site comprises a positive control site having immobilized thereon an authentic sample of said ligand.
7. The method of claim 1 comprising the step of mixing said conjugate with said liquid sample prior to step A.
8. The method of claim 1 wherein said conjugate is disposed in said flow path, said method comprising the additional step of transporting said liquid into solubilizing contact with said conjugate prior to contact with said test site.
9. The method of claim 1 wherein said first and second proteins comprise antibodies and at least one of said proteins is a monoclonal antibody.

10. The method of claim 1 wherein said first protein has a binding site specific to an epitope of human chorionic gonadotropin.

11. The method of claim 1 wherein said first protein has a binding site specific to an epitope of human progesterone.

12. The method of claim 1 wherein said second protein has a binding site specific to a second epitope on the ligand, and when said sample contains said ligand, the complex produced in step B comprises said ligand bound to both said first and second proteins, and color is produced by aggregation of said colored particles at said test site.

13. The method of claim 1 wherein said second protein binds with said first protein in competition with the ligand, and

when said sample contains said ligand, the complex produced in Step B comprises said ligand bound to said first protein, and

when said sample is free of said ligand, the complex produced in step B comprises said conjugate bound to said first protein, and color is produced by aggregation of said colored particles at said test site.

14. A test cell for detecting a ligand in a liquid sample, the test cell comprising  
an elongate casing for housing a permeable material and defining a liquid sample inlet, a reservoir volume, a test volume interposed between said inlet and reservoir volume, and a window through said casing at said test volume,

permeable material capable of transporting an aqueous solution disposed within said casing and defining a flow path extending from said sample inlet through said test volume and into communication with said reservoir volume,

a first protein having a binding site specific to a first epitope on said ligand, said first protein being immobilized at a test site, disposed within said test volume in fluid communication with said flow path and visible through said window, and

a sorbent material in said reservoir volume for drawing liquid sample along said flow path and into contact with said test site.

15. The cell of claim 14 further comprising a liquid sample filtering means disposed in said flow path between said inlet and said test site.

16. The cell of claim 15 wherein said filtering means is defined by a portion of said permeable material.

17. The cell of claim 14 wherein the cross sectional area of said flow path is restricted about said test site so that ligand in liquid passing therealong is localized at said test site.

18. The cell of claim 14 wherein said casing defines a second window through said casing and said cell further comprises a control site in fluid communication with said flow path visible through said second window.

19. The cell of claim 18 wherein said control site comprises a negative control site free of said first protein.

20. The cell of claim 19 wherein said control site comprises latex particles disposed in contact with said permeable material.

21. The cell of claim 18 wherein said control site comprises a positive control site having immobilized thereon an authentic sample of said ligand.

22. The cell of claim 14 further comprising a conjugate disposed in said flow path between said test site and said inlet; said conjugate comprising colored particles coupled to a second protein selected from the group consisting of proteins having a binding site specific to a second epitope on the ligand, and proteins which bind with said first protein in competition with the ligand.

23. The cell of claim 14 wherein said test site comprises an antibody fixed to latex particles disposed in contact with said permeable material.

24. The cell of claim 14 wherein said first protein binds with an epitope of human chorionic gonadotropin.

25. The cell of claim 14 wherein said first protein binds with an epitope of human progesterone.

26. The cell of claim 22 wherein at least one of said first and second proteins is a monoclonal antibody.

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